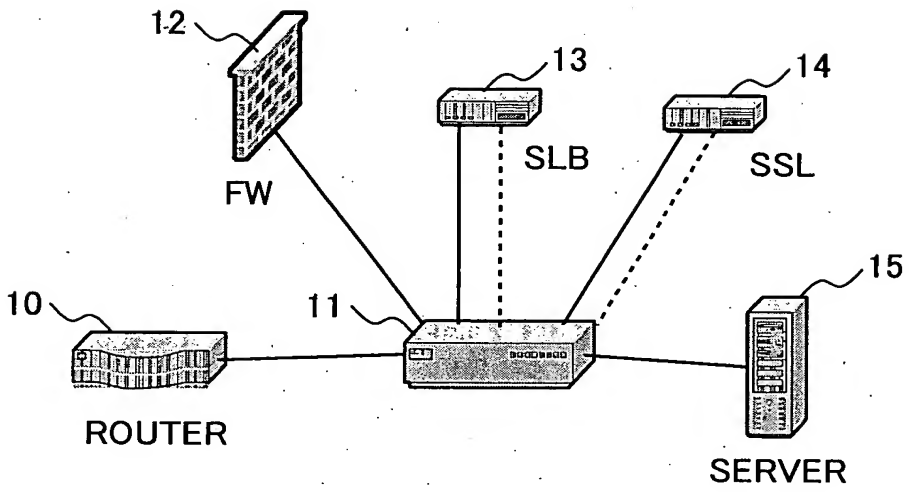
BEST AVAILABLE COPY

FIG.1



BEST AVAILABLE COPY

FIG.2

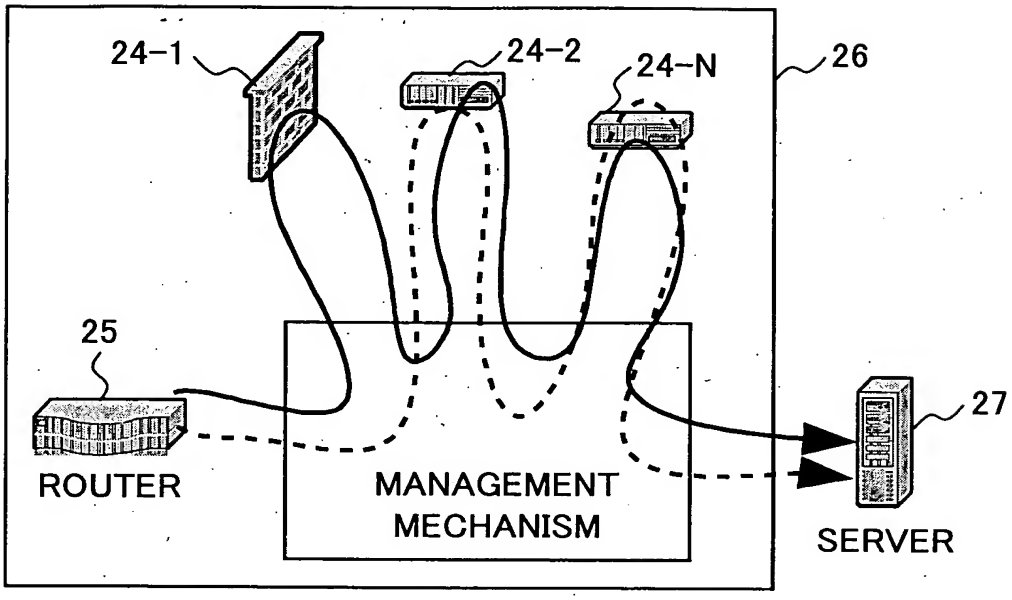


FIG.3

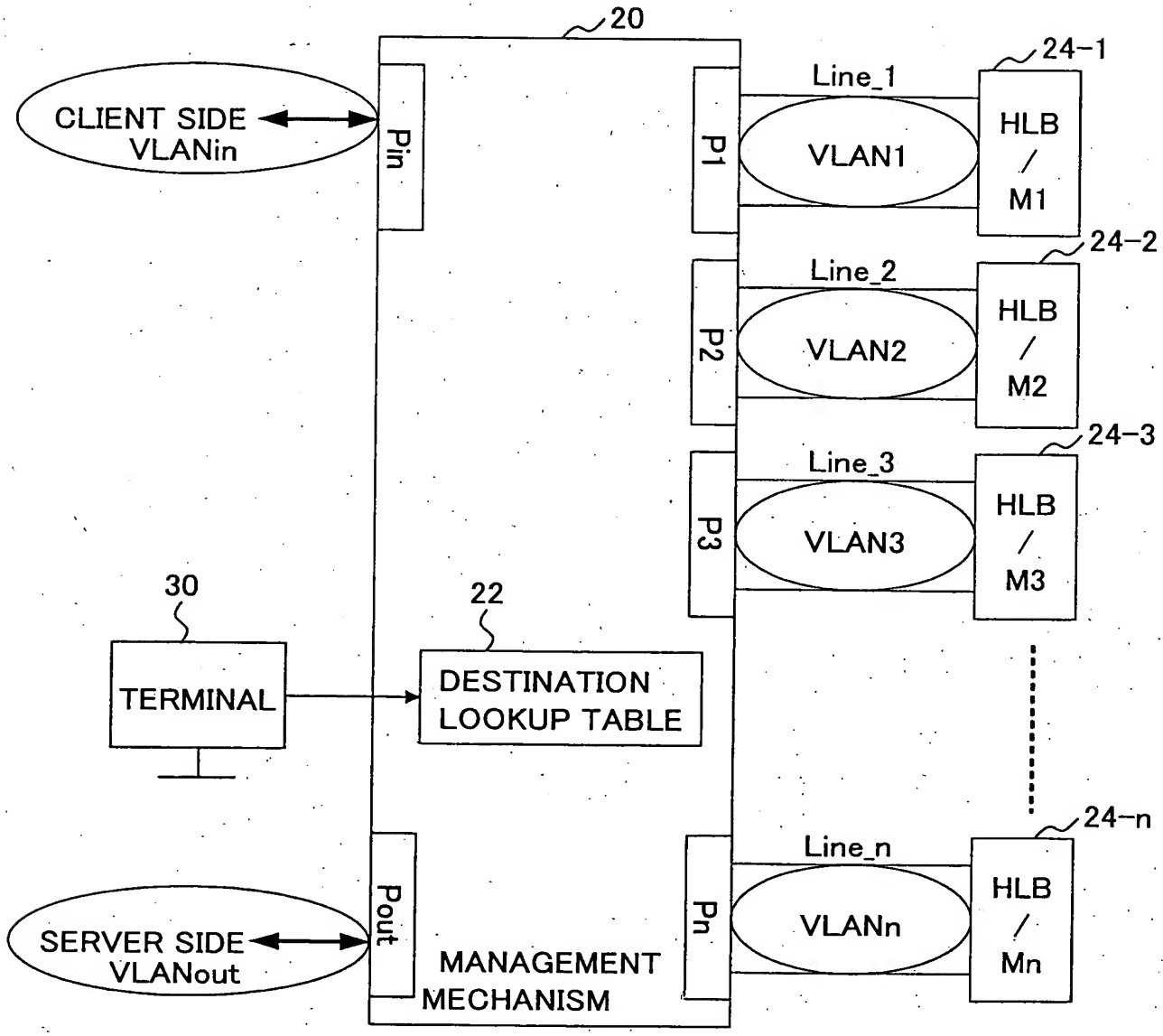

20
CLIENT SIDE
VLANin
Pin
P1
Line_1
VLAN1
24-1
HLB
/
M1
P2
Line_2
VLAN2
24-2
HLB
/
M2
P3
Line_3
VLAN3
24-3
HLB
/
M3
30
TERMINAL
22
DESTINATION
LOOKUP TABLE
Pout
SERVER SIDE
VLANout
MANAGEMENT
MECHANISM
Pn
Line_n
VLANn
24-n
HLB
/
Mn

FIG.4

		SEARCH KEY	SEARCH RESULT			
		VLANtag (32bit)	VLANtag (32bit)	MAC ADDRESS (48bit)	PHYSI-CAL PORT	
ENTRY OF USER A (VIRTUAL LINK INFOR-MATION)	a1 LINE	VLANin_a	UP VLAN1_a	M1	P1	UP-DIRECTIONAL ROUTING PATH
	a2	UP VLAN1_a	UP VLAN2_a	M2	P2	
	a3	UP VLAN2_a	UP VLAN3_a	M3	P3	
	a4	...	...	...	...	
	a5	UP VLANn_a	VLANout_a	Mout	Pout	
	a6	VLANout_a	DOWN VLANn_a	Mn	Pn	DOWN-DIRECTIONAL ROUTING PATH
	a7	...	...	...	...	
	a8	DOWN VLAN1_a	VLANin_a	Min	Pin	
ENTRY OF USER B (VIRTUAL LINK INFOR-MATION)	b1	VLANin_b	UP VLAN2_b	M2	P2	UP-DIRECTIONAL ROUTING PATH
	b2	UP VLAN2_b	UP VLAN3_b	M3	P3	
	b3	...	...	...	...	
	b4	UP VLANn_b	VLANout_b	Mout	Pout	
		VLANout_b	DOWN VLANn_b	Mn	Pn	DOWN-DIRECTIONAL ROUTING PATH
		...	...	...	...	
		DOWN VLAN2_b	VLANin_b	Min	Pin	
		...	...	...	...	
		...	...	...	...	
ENTRY OF USER X (VIRTUAL LINK INFOR-MATION)	c1	VLANin_x	UP VLAN2_x	M2	P2	UP-DIRECTIONAL ROUTING PATH
	c2	UP VLAN2_x	UP VLAN3_x	M3	P3	
	c3	...	...	...	...	
	c4	UP VLANn_x	VLANout_x	Mout	Pout	
		VLANout_x	DOWN VLANn_x	Mn	Pn	DOWN-DIRECTIONAL ROUTING PATH
		...	...	...	...	
		DOWN VLAN2_x	VLANin_x	Min	Pin	

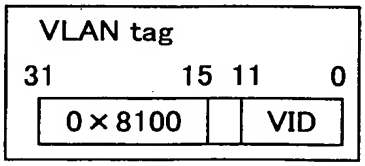


FIG.5

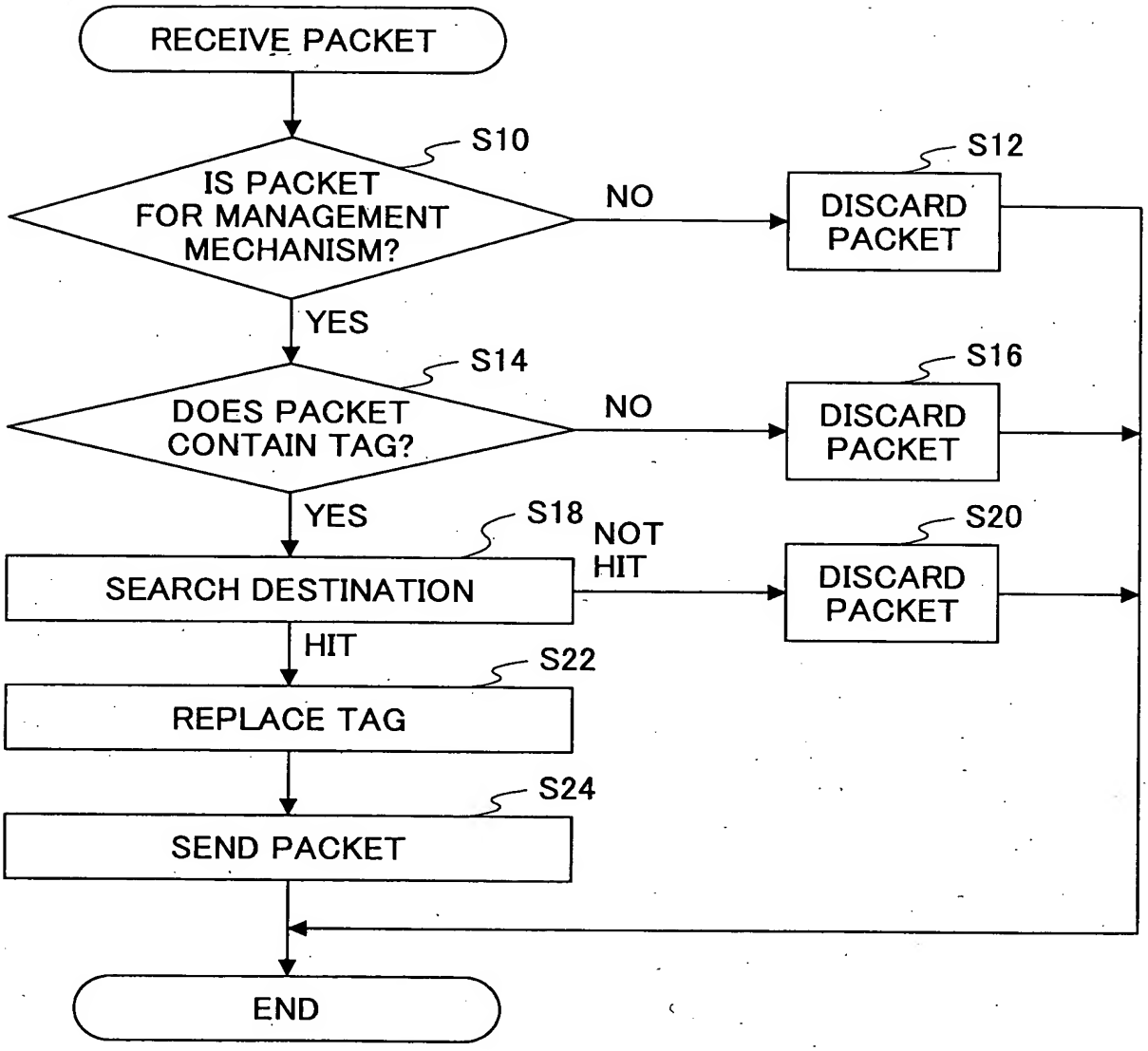

RECEIVE PACKET
S10
IS PACKET FOR MANAGEMENT MECHANISM?
NO
S12
DISCARD PACKET
YES
S14
DOES PACKET CONTAIN TAG?
NO
S16
DISCARD PACKET
YES
S18
SEARCH DESTINATION
NOT HIT
S20
DISCARD PACKET
HIT
S22
REPLACE TAG
S24
SEND PACKET
END

FIG.6

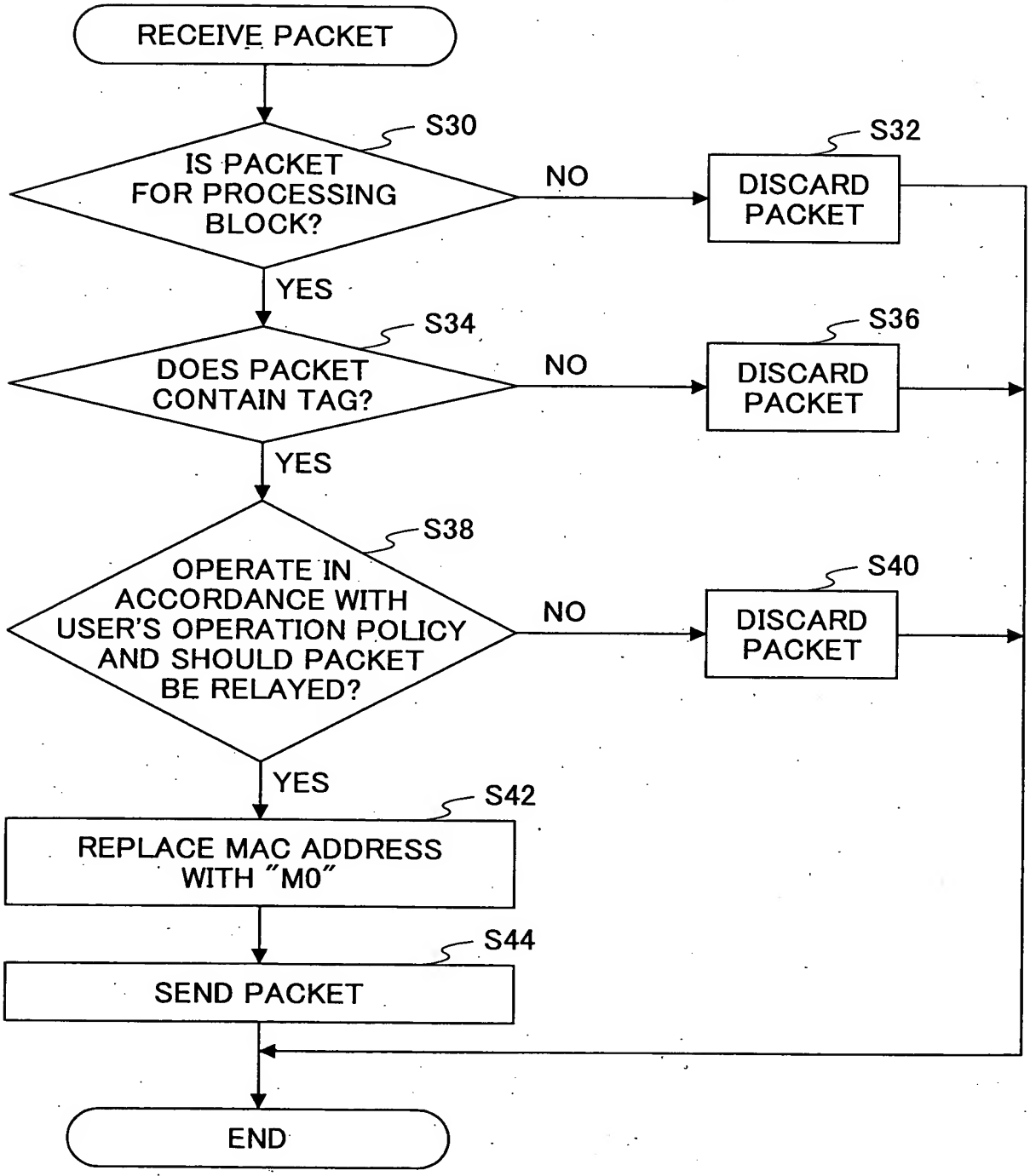

RECEIVE PACKET
S30
IS PACKET FOR PROCESSING BLOCK?
NO
S32
DISCARD PACKET
YES
S34
DOES PACKET CONTAIN TAG?
NO
S36
DISCARD PACKET
YES
S38
OPERATE IN ACCORDANCE WITH USER'S OPERATION POLICY AND SHOULD PACKET BE RELAYED?
NO
S40
DISCARD PACKET
YES
S42
REPLACE MAC ADDRESS WITH "M0"
S44
SEND PACKET
END

FIG.7

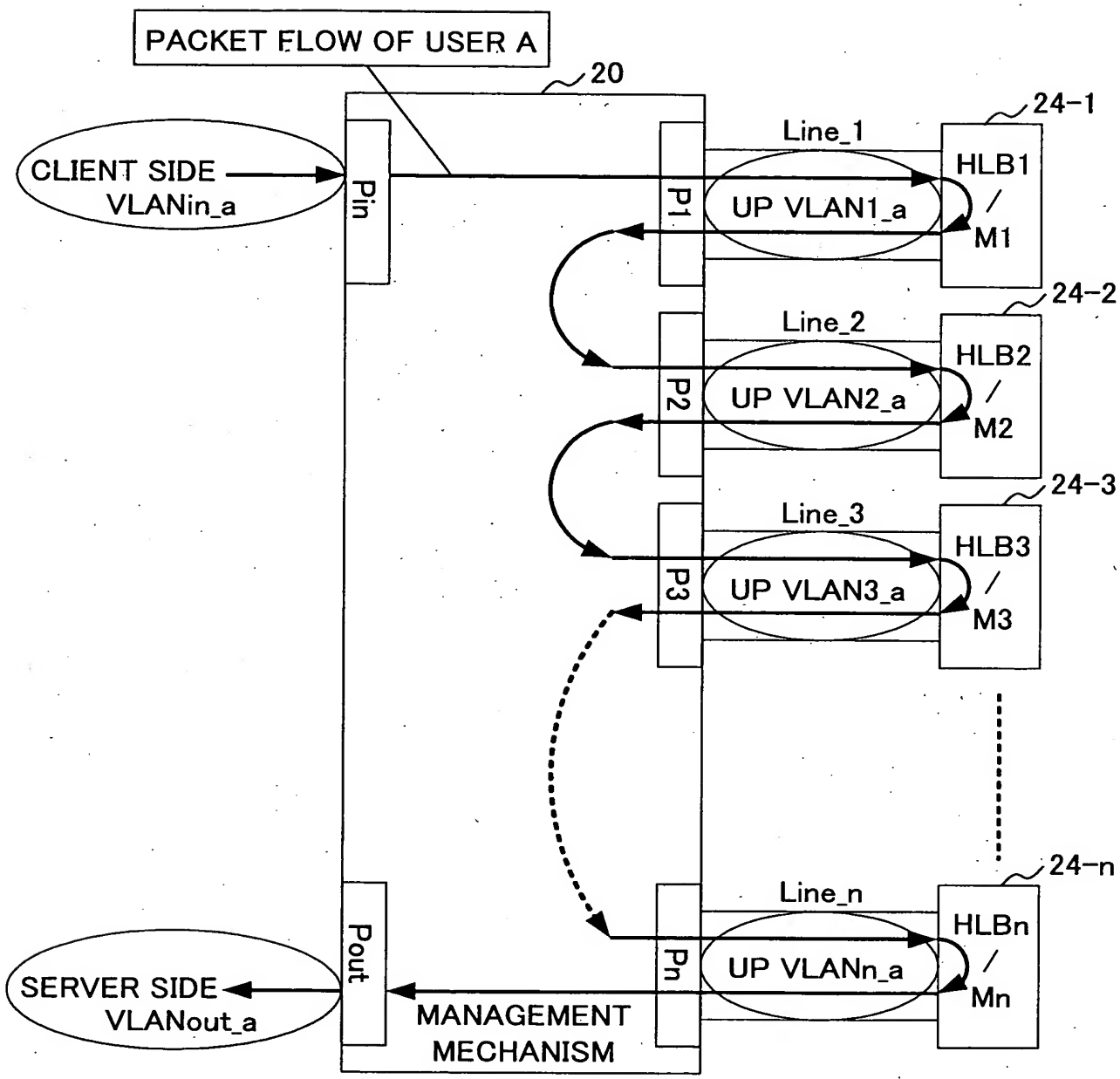

PACKET FLOW OF USER A
20
24-1
24-2
24-3
24-n
CLIENT SIDE
VLANin_a
Pin
P1
P2
P3
Pn
Pout
Line_1
Line_2
Line_3
Line_n
UP VLAN1_a
UP VLAN2_a
UP VLAN3_a
UP VLANn_a
HLB1
/
M1
HLB2
/
M2
HLB3
/
M3
HLBn
/
Mn
SERVER SIDE
VLANout_a
MANAGEMENT
MECHANISM

FIG.8

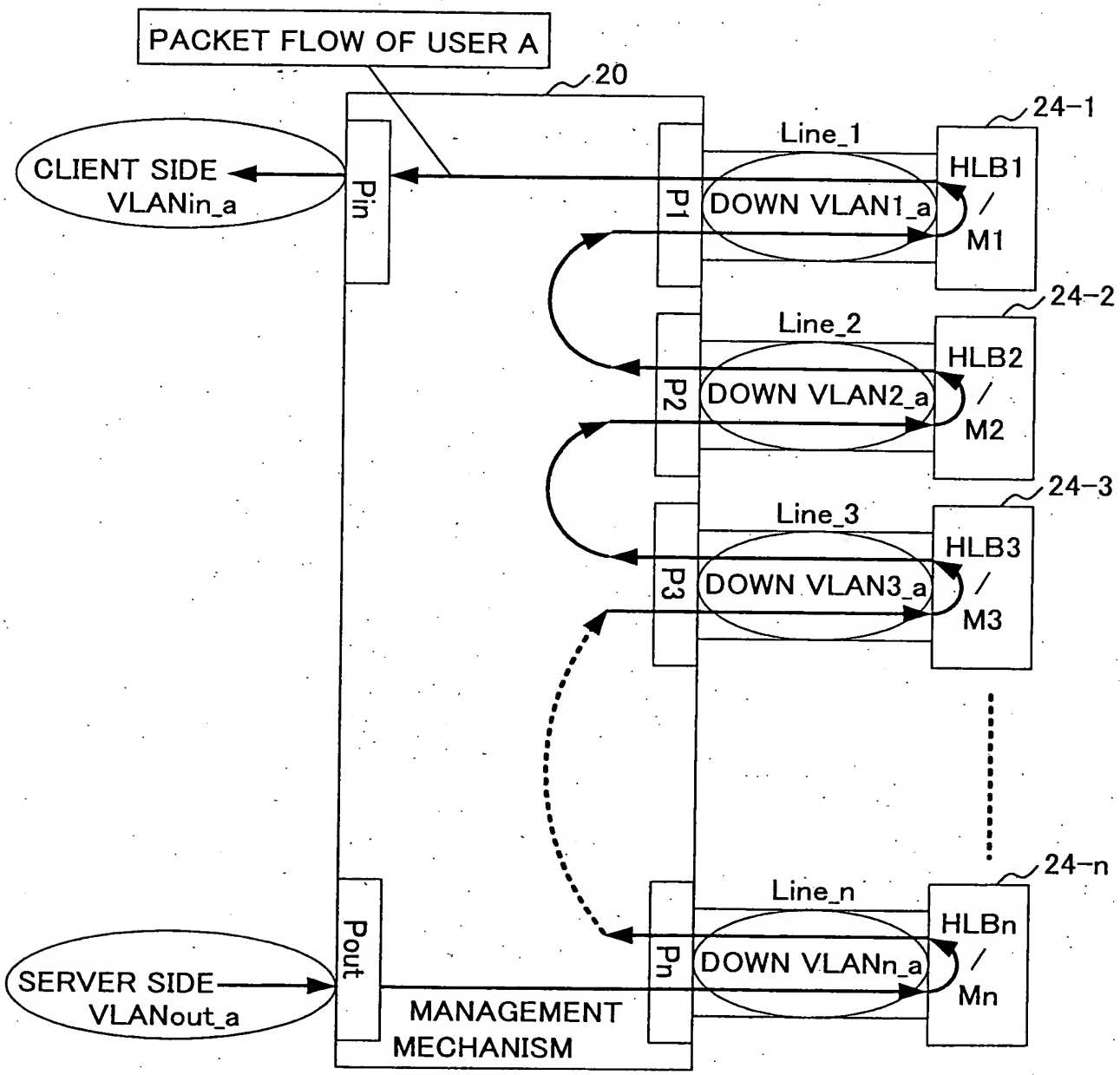

PACKET FLOW OF USER A
20
24-1
24-2
24-3
24-n
CLIENT SIDE
VLANin_a
Pin
P1
P2
P3
Pn
Pout
Line_1
Line_2
Line_3
Line_n
DOWN VLAN1_a
DOWN VLAN2_a
DOWN VLAN3_a
DOWN VLANn_a
HLB1
/
M1
HLB2
/
M2
HLB3
/
M3
HLBn
/
Mn
SERVER SIDE
VLANout_a
MANAGEMENT
MECHANISM

FIG.9

	SEARCH KEY	SEARCH RESULT		
	VLANtag (32bit)	VLANtag (32bit)	MAC ADDRESS (48bit)	PHYSICAL PORT
	VLANin_a	UP VLAN1_a	M1	P1
	UP VLAN1_a	UP VLAN2_a	M2	P2
	UP VLAN2_a	UP VLAN3_a	M3	P3
	...	...	...	...
	UP VLANn_a	VLANout_a	Mout	Pout
	VLANout_a	DOWN VLANn_a	Mn	Pn
	...	...	...	...
	DOWN VLAN1_a	VLANin_a	Min	Pin
b0 LINE	VLANin_b	UP VLAN1_b	M1	P1
b1	UP VLAN1_b	UP VLAN2_b	M2	P2
b2	UP VLAN2_b	UP VLAN3_b	M3	P3
b3	...	...	...	...
b4	UP VLANn_b	VLANout_b	Mout	Pout
	VLANout_b	DOWN VLANn_b	Mn	Pn
	...	...	...	...
	DOWN VLAN2_b	VLANin_b	Min	Pin
	...	...	...	...
	...	...	...	...
c2	VLANin_x	UP VLAN3_x	M3	P3
c3	UP VLAN3_x	UP VLAN4_x	M4	P4
	...	...	...	...
	UP VLANn_x	VLANout_x	Mout	Pout
	VLANout_x	DOWN VLANn_x	Mn	Pn
	...	...	...	...
	DOWN VLAN2_x	VLANin_x	Min	Pin